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ABSTRACT

This study investigates teachers' gender associations of school-related objects and activities. Thirty-four female teachers, from the preschool level to the seventh grade, were taught three different nonsense words representing the concepts masculine, feminine, and farms (neuter). The teachers were then presented with a list of 24 new words and asked to classify the words according to the most appropriate nonsense syllable. Fifteen of the items were related to school objects and contained no clue as to gender. Among these items, the teachers associated the following with the feminine nonsense syllable: blackboard, child painting, library, open book, a boy and a girl sitting at separate desks, poetry, a spelling lesson, dramatic play with puppets, Dick and Jane, and a workbook. Teachers associated fewer of the school-related items with the masculine nonsense syllable: pencil, a page of arithmetic, and a map. It is suggested that teachers facilitate the better performance of young girls and hinder the performance of young boys in the early years of schooling by providing a situation in which school is compatible with the girls' concepts of sex-appropriate behavior, but inappropriate with boys' concepts of sex-appropriate behavior. (Author/SS)

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GENDER CLASSIFICATION OF SCHOOL OBJECTS BY FEMALE TEACHERS

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ABSTRACT

Thirty-four female school teachers were taught three different nonsense words representing the concepts: masculine, feminine, and farm (neuter). Ss were then presented with a list of 24 new words and asked to classify the words according to the most appropriate nonsense syllable. The words associated with the feminine nonsense word were: blackboard, child' painting, library, open book, a boy and a girl sitting at seperate desks, poetry, a spelling lesson, dramatic play with puppets, Dick and Jane, and a workbook. The words associated with the masculine nonsense word were: pencil, a page of arithmetic, and a map. It is suggested that teachers facilitate the better performance of young girls and hinder the performance of young boys in the early years of schooling by providing a situation in which school is compatible with the girls ' concepts of sex-appropriate behavior, but inappropriate with boys' concepts of sex-appropriate behavior.

INTRODUCTION

This study is concerned with the manner in which teachers view school objects as related to gender. Kagan (1964) found that second grade boys were more likely to classify school objects as feminine than third grade boys; however, there was no difference for second and third grade girls. He suggests that the superior academic performance of girls in the primary grades is facilitated because girls view school as being congruent with their sex-role than boys. Mazurkiewicz (1960), in a study of high school adolescent boys and their fathers, found that both the boys and their fathers thought that reading was a feminine activity. One explanation of boys lower achievement and greater incidence of problems in school focuses on the interaction between the child's view of his sex-role and school culture. It is suggested that a conflict exists between appropriate male sex-role behaviors and the behavioral demands placed on the child in a school situation (Grambs and Waetjen, 1966; Kagan, 1964). The question arises that if children view school as a feminine situation, do teachers view school in a similar manner?

METHOD

Sample. Subjects were drawn from two graduate reading classes. Ss consisted of 36 females and 2 males. Male Ss were allowed to participate in the study and told only to mark their answer sheet "M". Male Ss were not included in the analysis. Female Ss were all teachers, although one had not started teaching as yet: they ranged in age from 22 to 55 years old ($\bar{x}$ = 4.9 years of experience), and taught from the preschool level to the seventh grade ($\bar{x}$ = grade 2).

PROCEDURE

Ss were tested in two groups (N_1 = 19, N_2 = 17) by a male E. Initially, each group was taught three different nonsense syllables representing the following concepts: A. objects associated with males, B. objects associated with females, and C. objects associated with farms. The nonsense syllables DEP, ROV, and FAS were associated with males, females, and farms respectively. After the Ss learned the associations, they were presented with a series of 24 test items to which Ss had to apply one of the three nonsense syllables previously learned. The detailed procedure follows.

Learning Phase. The E said, "I am going to tell you some words. Each of the words belongs in one of three groups. All of the words in one group are alike or go together in some way. We are to call these groups by three nonsense words. One group is called DEP, one group is called ROV, and one group is called FAS. First, I want you to learn these words. Please say them after me." E then had Ss repeat the words, then he spelled the words. "Now I am going to say some other words. Some of these words belong to the DEP group, others belong to the ROV group, and some to the FAS group. You must guess which group they belong to. I will tell you after each trial what

the correct answer is. In order to give you a hint, I will tell you some other words that belong in each group: DEP - man, baseball bat, a necktie; ROV - woman, knitting needles, a skirt; FAS - silo, pig, chicken." E then proceeded to present a series of 12 words. After Ss wrote one of the three nonsense syllables on the answer sheet, E then told Ss the correct answer. An S was considered to have learned the concepts if there were no errors on the last six word presentations. Some of the items in the learning series included: an electric train, aftershave lotion, a man's trousers (masculine items); a doll, lipstick, a woman's shoes (feminine items); and a cow, fields of corn, a haystack (farm items).

Test Phase. E then said, "Now, I am going to say some different words and I want you to tell me if they are DEP, ROV or FAS. Take a guess if you are not sure." E did not repeat any words, nor did he make any comments about the words. Words were presented at approximately five second intervals. The stimuli words in order of presentation were:

1. pencil
2. tree
3. blackboard with ABC on it
4. lion
5. library
6. rabbit
7. child's painting
8. rowboat
9. open book
10. a bird
11. a page of arithmetic
12. an apple
13. a school building
14. an alligator
15. a school desk
16. a cup
17. a map
18. a boy and a girl sitting at separate desks
19. a carrot
20. poetry
21. a spelling lesson
22. a dramatic play with puppets
23. Dick and Jane
24. a workbook

Test items numbered one through nineteen were developed and ordered by Kagan (1964) and administered in that order. Test items numbered twenty through twenty-four were not randomly ordered, but were included to obtain a broader measure of gender classification in the reading and language arts areas.

RESULTS

Of the 36 female Ss, 34 learned the concepts as described previously. Table I contains the percentage and number of Ss labeling each of the test words as masculine, feminine or farm, and the level of significance reached by each item. Most of the test words had a dominant association for the Ss at a significant level. It is suggested that items are classified according to an association with one sex or another in terms of the frequency with which it is associated with one sex or the other; thus, "rowboat" is labeled masculine because it is more frequently associated with males than females. The validity of this technique is supported by the fact that Ss labeled "tree," "rabbit," "bird," "apple," "alligator," and "carrot" more frequently as farm than either masculine or feminine.

Fifteen of the items were related to school objects. These items contained no clue as to gender. Chi squares were computed for the individual test items to determine if there were significant differences between the frequency of masculine, feminine, or farm responses. All items were found to be significant (p .05 for two tails) except: "a school desk," "a page of arithmetic," "a school building," "a cup," "a map," and "a workbook;" a "child's painting" approached the .05 level of confidence. In a second analysis, chi squares were computed to determine if there were significant differences between the frequency of masculine and feminine responses. This analysis indicated that all items were significant (p .05 for two tails) except: "a page of arithmetic," "a school building," and "a school desk."

Only "a pencil" and "a map" were classified as being masculine items by the teachers and Kagan's second grade children. The items classified as feminine by the teachers and the second grade children were "a blackboard," "a library," "a child's painting," "a book," and "a boy and a girl sitting at separate desks." The only differences between the teachers and the children were that the boys felt that "library" was masculine, and both the second grade girls and boys felt that "the child's painting" was slightly more masculine than feminine. The following items were not included in Kagan's study but were considered to be feminine by the teachers: "poetry," "a spelling lesson," "dramatic play with puppets," "Dick and Jane," and "a workbook."

Data for the present study and Kagan's show a similar classification of school objects for both teacher's and the students. Teachers were more likely to classify all items in the farm or neutral category; however, highly significant results were obtained.

TABLE I - SUMMARY OF DATA

Stimulus Word	Response Word DEP (Male) N	%	ROV (Female) N	%	FAS (Farm) N	%	Ch^2	p
1. Pencil	19	55.2	5	14.7	10	29.4	8.883	.02
2. Tree	2	5.9	1	2.9	31	91.1	51.250	.01
3. Blackboard with ABC	2	5.9	24	70.6	8	23.5	17.710	.01
4. Lion	15	44.1	0	0.0	19	55.2	20.058	.01
5. Library	5	14.7	18	52.9	11	32.3	7.470	.05
6. Rabbit	2	5.9	2	5.9	30	88.2	46.131	.01
7. Child's painting	6	17.6	17	50.0	11	32.3	5.353	*
8. Rowboat	25	73.5	1	2.9	8	23.5	26.889	.01
9. Open book	3	8.8	22	64.7	10	29.4	16.328	.01
10. A bird	2	5.9	4	11.8	28	82.3	36.951	.01
11. A page of arithmetic	14	41.2	10	29.4	10	29.4	.941	N.S.
12. An apple	0	0.0	4	11.8	30	88.2	46.837	.01
13. A school building	8	23.5	12	35.3	14	41.2	1.646	N.S.
14. An alligator	12	35.3	0	0.0	22	64.7	21.417	.01
15. A school desk	8	23.5	13	38.2	13	38.2	1.470	N.S.
16. A cup	10	29.4	12	35.3	12	35.3	.234	N.S.
17. A map	15	44.1	6	17.6	13	38.2	3.941	N.S.
18. A carrot	0	0.0	1	2.9	33	97.0	62.194	.01
19. A boy and girl at desk	2	5.9	17	50.0	13	38.2	10.766	.01
20. Poetry	2	5.9	22	64.7	10	29.4	17.887	.01
21. A spelling lesson	3	8.8	18	52.9	13	38.2	10.296	.01
22. Dramatic play	5	14.7	19	55.2	10	29.4	8.883	.02
23. Dick and Jane	4	11.8	15	44.1	15	44.1	7.118	.05
24. A workbook	6	17.6	15	44.1	13	38.2	3.941	N.S.

* p approaches the .05 level

DISCUSSION

The results suggest that female elementary teachers view common objects related to schooling as more clearly associated with the female sex than with the male sex. This is not surprising if gender classification is linked with the frequency that the object is connected with males or females in the environment. The NEA Research Bulletin (1970) states that only 13.7% of all elementary teachers are male. Most of the male elementary teachers are concentrated in the intermediate grades rather than in kindergarten or the primary grades; thus, creating an environmental contingency linking females and feminity with school objects in the primary grades.

Three major sources of sexual identity help determine a person's concept of himself and others as male or female. These major sources of sexual identity are: the inherent biological differences, the mores and attitudes of the individual's culture, and the atitudes and experiences provided by those people who are emotionally meaningful during childhood (Josselyn, 1966).

Substantial psychological and physiological research has compared the difference between males and females. It has been demonstrated that certain cognitive processes of males and females differ. Developmentally, females mature more rapidly and are less subject to biological stress (Nash, 1970). Hamburg and Lunde (1966) state that studies done of subhuman species indicate that the male hormone testosterone may be one factor leading to the greater aggression of males. Differences between male and female neonates have been recorded, suggesting some biological determinants of sex-differentiated behavior (Hamburg and Lunde, 1966). These biological determinants of sexual identity may help direct a person; however, it is most often agreed that the most important sexual differences are socioculturally, rather than biologically determined.

The United States is a heterogeneous nation, and as such, lacks universal and clearly defined guidelines which help determine a person's sexual identify: such guidelines are present in a homogeneous culture.

The most important determinant of sexual identity is the attitudes of those people who are especially significant during the period of childhood. Parents, other close relatives, siblings, peers, and teachers are shapers of the child's sexual identity. Sexually appropriate behavior is lavishly rewarded by these socially significant people.

Turner (1970) states that sexual roles have two major aspects: viable roles in which the degree of domination or equality is most important, and functional role differentiation in which activities are differentiated according to sex. Functional role differentiation begins at birth when an infant is first labeled as a boy or a girl. Fagot and Patterson (1969) observed that in nursery school situations, a clear difference in play activity preference existed. Boys spent more time using blocks, transportation toys, tricycles, and playing in the sandbox. Girls participated

in more art activities, dramatic play, and listening to stories. Of the sex-preferred activities that were reinforced by the teacher, 83% were feminine. In a study of sixth grade classes, Meyers and Thompson (1963) found that boys received more disapproval than girls. The type of teacher disapproval also varied with the sex of the student: boys were more often disapproved of for inattention or misbehavior, while girls were disapproved of more often because of a lack of knowledge or skill (Spaulding, 1963). Teachers were more likely to use a harsh or angry tone of voice when disapproving of boys (Jackson, 1966). The typical behaviors required in schools are typically feminine: being quiet, compliant, and well behaved: it is these behaviors that girls receive more praise for in school (Sadker and Sadker, 1968). It is interesting to note that the child in first grade whose I.Q. is most likely to increase during the four years following first grade is described as "competent, self-assertive, independent, and dominant in interaction with other children." The child whose I.Q. is likely to decrease during the four years following first grade are described as "passive, shy, and dependent" (Maccoby as quoted in Sadker and Sadker, 1968). These very characteristics could be used to describe boys and girls respectively (Sears, Maccoby, and Levin, 1957; Goldberg and Lewis, 1969).

If teachers view school as a feminine environment, and reinforce those behaviors which are regarded as sex-appropriate, then teachers would be less likely to reinforce school behaviors for boys because school behaviors are considered feminine and thus inappropriate for boys who are expected to exhibit masculine behaviors. Boys, more so than girls, seem especially resistant to sex-inappropriate behavior (Biller and Borstleman, 1967; Brown, 1958), and while girls will frequently engage in masculine activities, boys will rarely engage in feminine activities (Honzik, 1951). Boys are placed in a double-bind situation in school. They want to act in a sex-appropriate manner, but are not provided with teacher support, and are frequently disapproved of if they display those behaviors which they believe are sex-appropriate. It is possible that one of the reasons for the three to ten to one ratio of boys to girls in learning and behavior disorders (Bentzen, 1966) is the result of the classification of school by both children and teachers as feminine. One of the possible ways that this situation could be changed is to expose young children to more male teachers in kindergarten and the primary grades to make school less incongruent with young boys' sex-role typing. Assuming that both males and females were represented, both sexes would most likely view school as an acceptable or even desirable part of their sex-role. By reducing some of the incongruity that young boys experience in relation to school, it is likely that they would be more motivated to achieve academically and behavior problems would decrease. It also seems important to change the image of the teaching profession from a feminine one to a more neutral one to change the public's attitudes toward teachers and education. It is also possible that some fundamental changes in educational methodology may be necessitated to make school congruous with both boys and girls attitudes about their sex-role.

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